

L.O: To write numbers as products of their prime factors.

Do Now:

- 1) Write the first 5 multiples of 10.
- 2) Write the 3rd multiple of 4.
- 3) Write all the factors of 24.
- 4) Write all the PRIME factors of 24.
- 5) Explain why 1 is not a prime number.



**Keyword
PRODUCT**

L.O: To write numbers as products of their prime factors.

Do Now:

1) Write the first 5 multiples of 10.

10, 20, 30, 40, 50

2) Write the 3rd multiple of 4.

12

3) Write all the factors of 24.

1, 24, 2, 12, 3, 8, 4, 6

4) Write all the PRIME factors of 24.

2, 3

5) Explain why 1 is not a prime number.

1 has only 1 factor but primes must have only 2 factors.

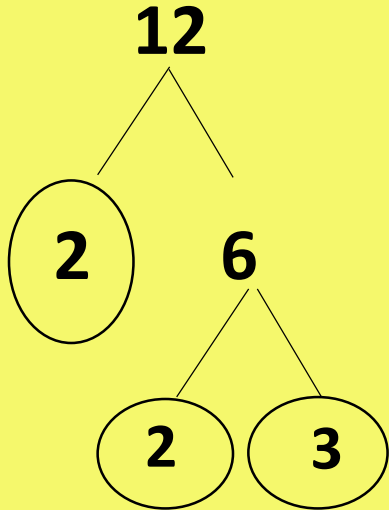


**Keyword
PRODUCT**

I Do:

Keyword
PRODUCT

Write the number 12 as a product of it's prime factors.



The answer:

$$12 = 2 \times 2 \times 3$$

Prime Numbers:

2,3,5,7,11,13,17,19,23,29,31,

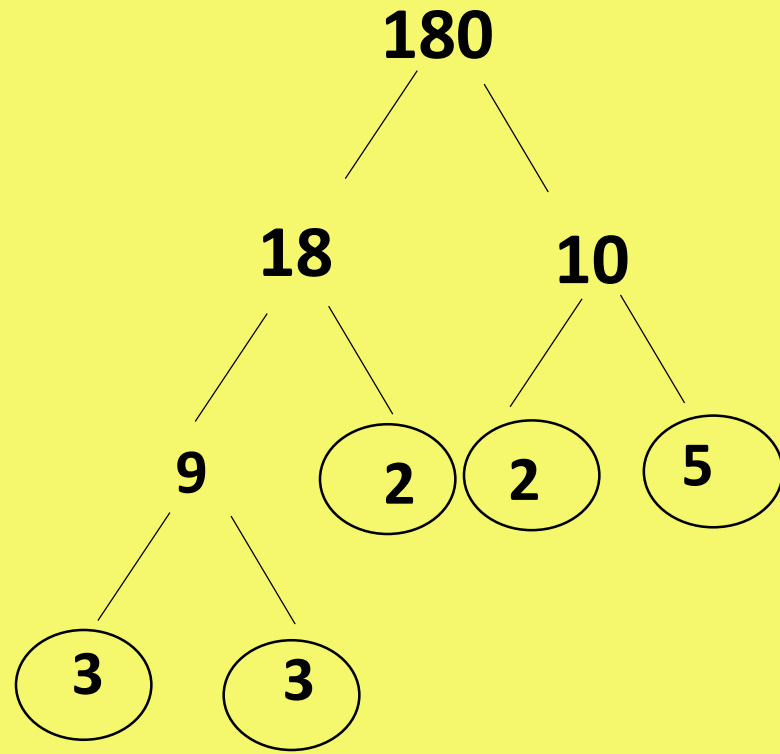
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Is there more than one way to draw the factor tree? Does it make a difference to the final answer?

I Do:

Keyword
PRODUCT

Write the number 180 as a product of it's prime factors.



Prime Numbers:
2,3,5,7,11,13,17,19,23,29,31,
.....

The answer:

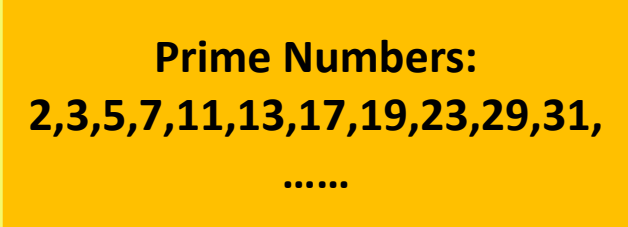
$$180=2 \times 5 \times 3 \times 2 \times 3$$

We Do:

Write the number 39 as a product of it's prime factors.

A yellow starburst graphic containing the text 'Keyword PRODUCT'.

Keyword
PRODUCT

A yellow rectangular box containing the text 'Prime Numbers: 2,3,5,7,11,13,17,19,23,29,31,

Prime Numbers:
2,3,5,7,11,13,17,19,23,29,31,
.....

Answer:

$$39 = 3 \times 13$$

We Do: 36 expressed as a product of primes is:

$$36 = 2 \times 2 \times 3 \times 3$$

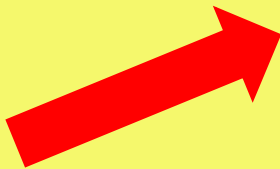
Can you write this in a more efficient way?

$$36 = 2 \times 3 \times 2 \times 3$$

$$36 = 3 \times 2^2 \times 3$$

$$36 = 2^2 \times 3^2$$

This is
called index
form



You Do:

You have a worksheet on Prime Factors to complete.

You Do: Answers

| | | |
|-----|------|--|
| 1. | 8 | = $2 \times 2 \times 2$ |
| 2. | 28 | = $2 \times 2 \times 7$ |
| 3. | 25 | = 5×5 |
| 4. | 27 | = $3 \times 3 \times 3$ |
| 5. | 32 | = $2 \times 2 \times 2 \times 2 \times 2$ |
| 6. | 34 | = 2×17 |
| 7. | 54 | = $3 \times 3 \times 3 \times 2$ |
| 8. | 49 | = 7×7 |
| 9. | 81 | = $3 \times 3 \times 3 \times 3$ |
| 10. | 100 | = $2 \times 2 \times 5 \times 5$ |
| 11. | 125 | = $5 \times 5 \times 5$ |
| 12. | 320 | = $5 \times 2 \times 2 \times 2 \times 2 \times 2$ |
| 13. | 270 | = $3 \times 3 \times 3 \times 5 \times 2$ |
| 14. | 540 | = $3 \times 2 \times 3 \times 3 \times 5 \times 2$ |
| 15. | 1000 | = $5 \times 2 \times 5 \times 2 \times 5 \times 2$ |